The Natural State Scribe

Autumn 2005

A few words from the editor...

If nothing else, the events of the past few weeks have taught us that weather is often as awe inspiring as it is deadly. The effects of a large tornado or a strong land falling hurricane, such as Katrina, are long lasting. While material objects can be replaced, there are often more important facets that must be dealt with. I bring this up because several months of potentially dangerous weather are rapidly approaching. The official hurricane season continues through November and by that time, we will be entering our secondary tornado season. This of course is followed by old man winter and the storms than can wreck havoc for days. Try to keep an eye to the sky and know your National Weather Service is here around the clock watching those very same skies for you.

Joe Goudsward

A sure sign that Autumn is coming...

Oftentimes on a crisp and cool morning, area lakes and rivers appear to be smoldering. Of course the water is not on fire but these rising plumes are referred to as Arctic Sea Smoke. The sea smoke is actually a form of steam or evaporation fog and is created when cold air overruns the warmer and more moist air at the water's surface. Because that air is so much warmer, the air above it will quickly rise and condense into small droplets that are visible, much like seeing your breath on a cold winter day. This phenomenon occurs when colder air starts to make its way back across Arkansas and is a sure sign that autumn has arrived.

Autumn begins September 22 at 5:23 p.m. Central Time.

"There is really no such thing as bad weather, only different kinds of good weather"

John Ruskin

"Some people are weather wise, but most are otherwise."

Benjamin Franklin

Inside this issue:

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LITTLE ROCK UPPER AIR TEAM RECEIVES THE NATIONAL ISAAC CLINE AWARD

Michael Reid

In April 2005 the Upper Air Team at the National Weather Service in North Little Rock received notice that they had been awarded the national Isaac M. Cline award, the agency's highest recognition for operational excellence. Honored in the Upper Air Observation category, the team consisted of Data Acquisition Program Manager Jimmy Russell, Hydrometeorological Technicians Michael Reid and Brian Burleson, Meteorological Intern Paul Iñiguez, and Electronics Technician David Gross.

The Little Rock Upper Air Team has been exemplary in its efforts to collect and provide radiosonde data (pressure, relative humidity, temperature, wind speed and direction) to NOAA's National Centers for Environmental Prediction. NCEP monitors and evaluates upper air data on a daily, monthly, and yearly basis and maintains station performance scores with a perfect score being 300. For the 12 month rating period, the monthly average score for Little Rock was 295.12. It was the third highest score in the upper air network and the highest for stations in the contiguous 48 states. There are 102 upper air stations in the network, in the United States, the Pacific Islands, and the Caribbean.

Upper air flights are performed at all sites twice each day at 00 UTC and 12 UTC. These times are 5 PM CST/6 PM CDT and 5AM CST/6AM CDT respectively for the North Little Rock office. Also included in the monthly average scores are numerous special upper air releases to support severe or otherwise hazardous weather prediction.

Quoting retired Air Force Brig. General David L. Johnson, director of the National Weather Service, "Our primary mission is to save lives and property, and the Cline Award recognizes the high level of proficiency in which the National Weather Service employees carry out their tremendous responsibilities."

All of us here at the NWS would like to offer our congratulations to our upper air team for this esteemed award.

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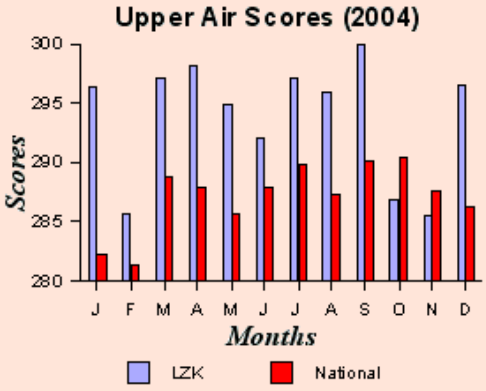
LITTLE ROCK UPPER AIR TEAM RECEIVES THE NATIONAL ISAAC CLINE AWARD

Continued...

Jimmy Russell (right), Data Acquisition Program Manager with the National Weather Service in Little Rock, accepts an individual National Isaac M. Cline Award on September 2, 2005. Presenting the award was Bill Proenza, Director of the Southern Region of the National Weather Service.



Upper Air Scores (300 is perfect) for the National Weather Service in Little Rock (LZK) versus the National Average.

Amie Browne, a meteorologist intern with the NWS office in Little Rock, gets Ready to launch a radiosonde and weather balloon to gather upper air information.

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NWS LITTLE ROCK CONTINUES TO PROVIDE AWARD WINNING AVIATION SERVICE

Newton Skiles

The mission of the National Weather Service (NWS) Aviation Weather Services Program is to provide quality weather forecast information and services to the aviation community for the protection of life and property, and to increase the efficiency of the National Airspace System.

To meet this mission, WFO Little Rock forecasters routinely provide terminal aviation forecasts for four of the major airports in Arkansas; Little Rock, Hot Springs, Harrison and Pine Bluff, plus an aviation route forecast from Little Rock to Springfield, MO. Forecasts include such important weather parameters as cloud ceiling heights, restrictions to visibility, wind speed and direction along with any significant weather.

The Weather Service Office in Little Rock, through its Aviation Team, provides valuable training and outreach to the aviation community. Team members are Senior Forecaster and Team Leader Newton Skiles, Science and Operations Officer Chris Buonanno, and Meteorologist Intern Paul Iñiguez. Partnering with such organizations as the Federal Aviation Administration (FAA) and the Arkansas Aerospace Education Center, the WFO Little Rock Aviation Team provides seminars and workshops to help pilots better understand weather, and its effects on flying. Because of its outstanding outreach and training activities, the team won the NWS Southern Region Quarterly Aviation Award, and the NWS National Quarterly Aviation Award, both in 2004.

We always welcome feedback on our aviation products. E-mail questions or comments concerning the NWS aviation program to Newton.Skiles@noaa.gov

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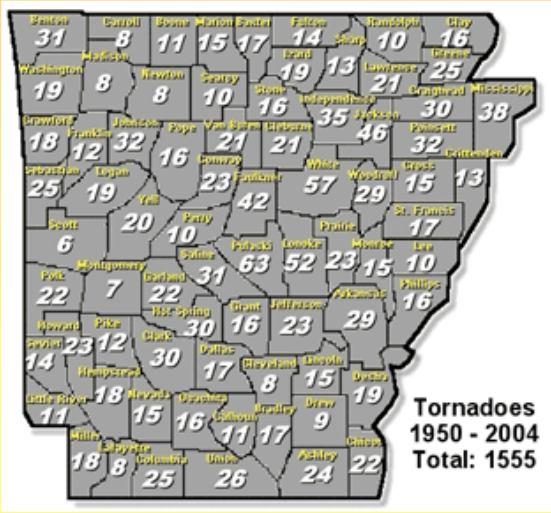
Arkansas Tornado Climatology

Joe Goudsward

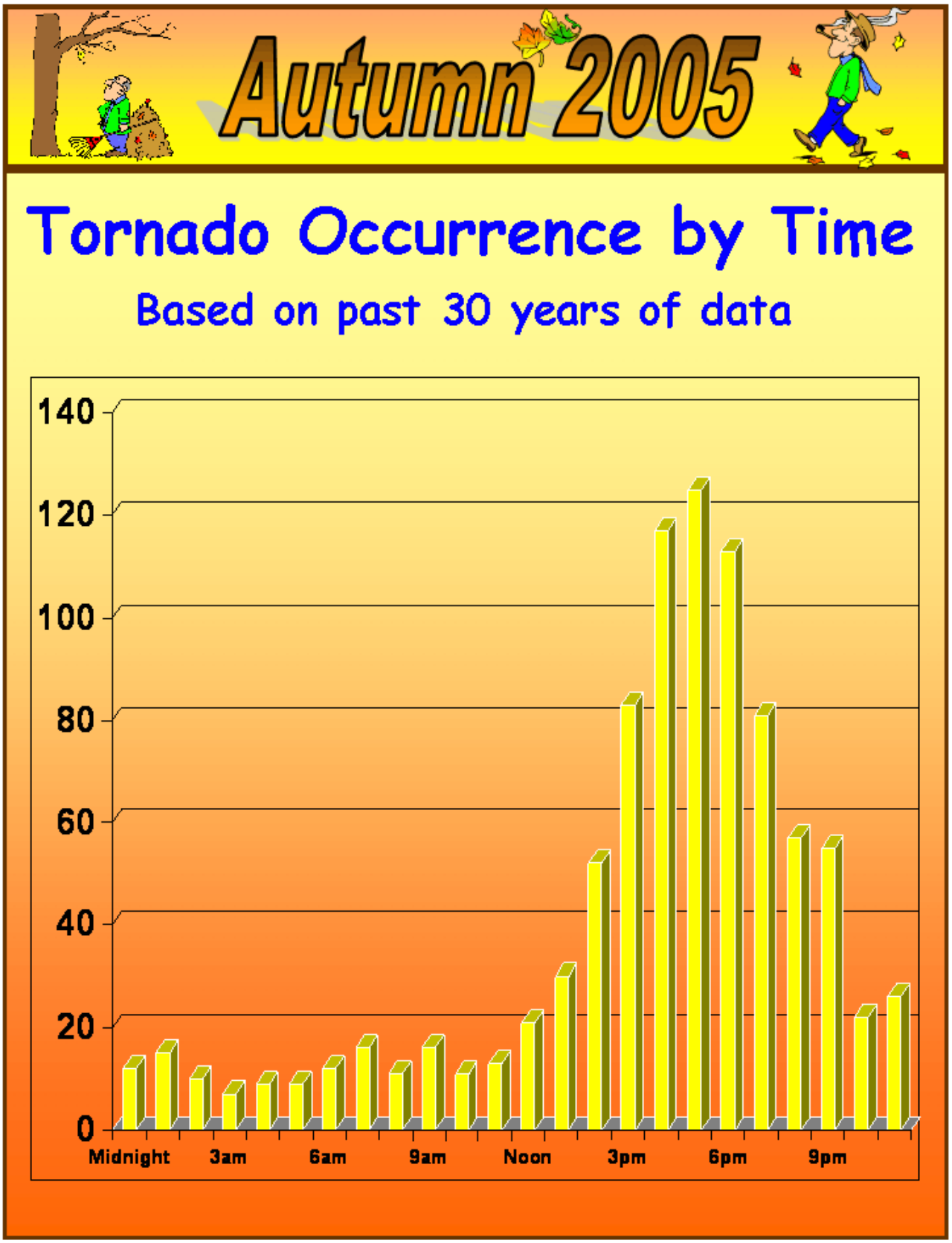
We all know that thunderstorms and their most dangerous offspring, the tornado, can occur at any time of the year or at any time of the day or night. The figure below shows the number of confirmed tornadoes in Arkansas by county between 1950 and 2004.



Tornadoes by County

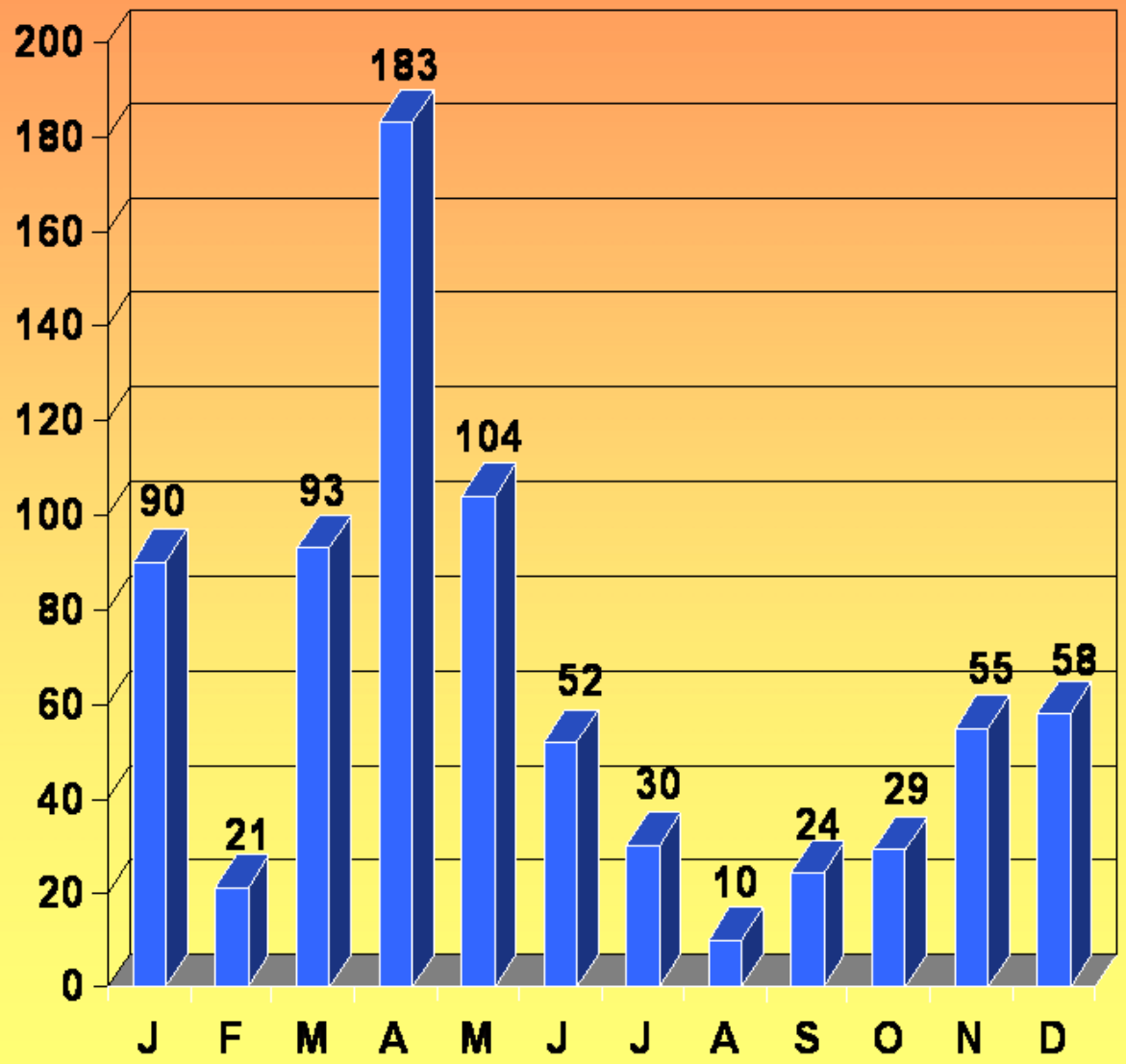
Many factors come into play for the large discrepancy between counties, including topography and population. The number of confirmed tornadoes continues to climb steadily as tornado detection technology increases and more spotters are trained. While twisters can and do occur seemingly when they want, there are times of the day and times of the year when the odds increase significantly. Tornadoes most commonly occur in the late afternoon and early evening. This is the time of the day when the atmosphere is at its warmest and at its most unstable. Please refer to the graph on page six for a breakdown of when tornadoes have occurred in Arkansas.

Tornadoes also have seasonal peaks. Our peak tornado season usually runs from mid March through early June, when the weather pattern shifts from winter mode to summer mode. There is also a secondary spike in January. A tornado lull usually occurs during the summer months as high pressure dominates. Refer to the graph on page seven for a monthly look at when tornadoes have occurred.


Autumn 2005
Tornado Occurrence by Time
Based on past 30 years of data
140
120
100
80
60
40
20
0
Midnight
3am
6am
9am
Noon
3pm
6pm
9pm

Occurrence by Month

Based on past 30 years of data



Autumn Double Trouble

LOLWEEHAN

VIHSGTINKAGN

BOAFTOLL

TNGIUHN

PISPKMUN

NYOCUT FASRI

RANTADDS MITE

NARGIK LEEVAS

ROECOL AHREEWT

ROWDL ESISRE

NUATULMA NQUIXEO

KACBRSOAZR

1 2 3 4 5 6 7 8 9 10 11 12 13 14

Unscramble each of these words associated with Autumn. Take the appropriate letters from the clues and move them to the numbered squares to reveal a secret message.

WINTER OUTLOOK

Paul Iñiguez - Meteorologist

The latest winter outlook from the Climate Prediction Center shows an increased chance for above normal temperatures across the Midwest, Great Lakes and southern Front Range region (see figure 1). Across Arkansas, there are equal chances for temperatures to be at, above or below normal this winter. This means that large, persistent cold outbreaks will not be likely this winter. Any cold air that does make it into Arkansas will be rather shallow and not last long.

For precipitation, there is an increased chance that the western and central areas of Arkansas could be above normal through the winter (see figure 2). Combined with the temperature outlook, Arkansas will likely see below normal snowfall this season.

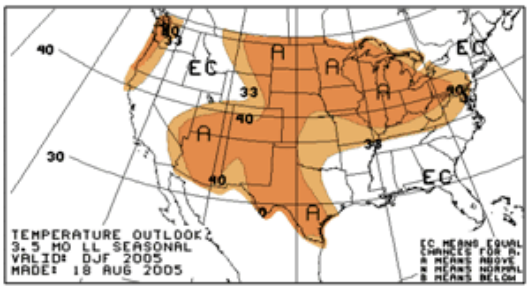


Figure 1 – Winter Temperature Outlook

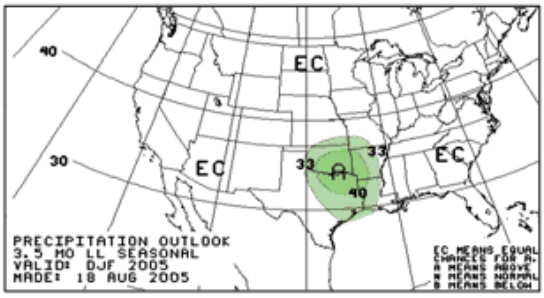


Figure 2 – Winter Precipitation Outlook

The temperature and precipitation outlooks combined may signal a slight increase in the possibility of seeing precipitation fall in the form of ice this winter.

Taking a look at historical data for winter (numbers are for Little Rock, AR), the average high temperature is 52.5 degrees. On average, there are 2 days during the winter with a high temperature below 32 degrees. The average low is 33.2 degrees. On average, there are 6 days with lows below 20 degrees.

The five warmest, coolest, and snowiest winters are listed in the table below.

Top Five Warmest Winters

1. *1889-1890 – 53.4° F*
2. *1879-1880 – 51.4° F*
3. *1931-1932 – 50.4° F*
4. *1881-1882 – 49.5° F*
5. *1906-1907 – 48.5° F*

Top Five Coolest Winters

1. *1977-1978 – 35.9° F*
2. *1978-1979 – 37.2° F*
3. *1904-1905 – 37.3° F*
4. *1917-1918 – 37.4° F*
5. *1898-1899 – 37.7° F*

Top Five Snowiest Winters

1. *1959-1960 – 26.6"*
2. *1917-1918 – 26.0"*
3. *1965-1966 – 21.6"*
4. *1892-1893 – 16.6"*
5. *1987-1988 – 16.1"*

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A moon by any other name

Joe Goudsward

Full moon names and their meanings date back to the Native American Algonquin tribes of the northern and eastern United States. The tribes kept track of the seasons by giving each full moon its own distinctive name. The dates of the full moons often shift from year to year as the lunar month is only 29 days long. The following is a list of full moon names and how the name was derived:

Full Wolf Moon (January) - Named for the packs of wolves that would howl hungrily outside the Indian villages during the coldest part of the winter.

Full Snow Moon (February) - Because the heaviest snow usually fell during this month, this month's full moon was named the snow moon. Also referred to as the Hunger Moon as harsh winter conditions often made hunting for food very difficult.

Full Worm Moon (March) - As temperatures warmed and the ground began to thaw, earth worms would begin to reappear and the full moon was named the Worm Moon. Also called the Crust Moon because the snow cover would become crusted from the cycle of thawing during the day and freeing at night.

Full Pink Moon (April) - One of the earliest widespread flowers of the spring is the wild ground phlox or the herb pink moss. This is where the name for this full moon comes from. This full moon is also commonly called the Full Fish Moon as this was the time the shad would swim upstream to spawn.

Full Flower Moon (May) - During this time of the year, flowers are abundant just about everywhere and hence the name. This moon is also referred to as the Full Corn Planting Moon for what should be obvious reasons.

Full Strawberry Moon (June) - Also called the Full Rose Moon, its name comes from the relatively short season for harvesting strawberries during the month of June.

Full Buck Moon (July) - Named for when the new antlers of buck deer push out of their foreheads. This moon is also commonly called the Full Thunder Moon for the frequent thunderstorms that occur during this time of the year.

Continued on Page 11

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A moon by any other name Continued...

Full Sturgeon Moon (August) - Named by the fishing tribes since sturgeon, a large fish common in the Northeast, was most readily caught during this month. This moon is also called the Full Red Moon as it often takes on a reddish hue through the summer haze.

Full Harvest Moon (September) - This is the full moon closest to the autumnal equinox and on occasion may occur in October. At the peak of the harvest, farmers can often work late into the night by the light of the full moon and hence its name.

Full Hunters Moon (October) - With trees having lost their leaves and crops having been harvested, it was time to hunt. Deer were already fattened up for the upcoming winter and were often hunted at night by the light of the moon to provide food for the long winter.

Full Beaver Moon (November) - This moon was named as it was the time of the year to set beaver traps to ensure furs for the upcoming winter. Another suggestion for the name comes from the fact that beavers were actively preparing for the winter months. It is also referred to as the Full Frost Moon.

Full Long Nights Moon (December) - During this time of the year, the winter cold tightens its grip and the nights are at their coldest and darkest. This full moon is also referred to as the Full Cold Moon.

Full Moon Fever

Full Moon dates for 2006

January 14th	4:48 a.m.
February 23rd	11:44 p.m.
March 14th	6:35 p.m.
April 13th	12:40 a.m.
May 13th	2:51 a.m.
June 11th	2:02 p.m.
July 10th	11:01 a.m.
August 9th	6:54 a.m.
September 7th	2:42 p.m.
October 6th	11:12 p.m.
November 5th	7:58 a.m.
December 4th	7:24 p.m.

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WEATHER AND FISHING by Lance Pyle

What are two subjects that nobody will ever know all the answers to? Answer: Weather and Fishing. Weather and fishing go hand in hand like ice cream and apple pie. Weather plays a very large part in the success of an angler since it determines fish location, fish attitude, and the rate at which fish can digest their food (metabolism). This article will discuss mainly the Largemouth Bass, though many theories can also be applied to its cousins the Smallmouth Bass and the Spotted Bass.

Spring is a time of warming temperatures. The daylight hours are becoming longer, the sun angle increases each day, and air and water temperatures continue to warm. This all signals to the fish that they need to reproduce to sustain their population. The spring fishing can be broken into three stages...pre-spawn, spawn, and post-spawn. During pre-spawn, water temperatures will generally be between 50 and 55 degrees, 55 to 65 degrees for the spawn and over 65 degrees for the post-spawn period. During the pre-spawn period bass fishing is at its best. Bass instinctively know that they need to feed heavily before the spawn and the best time to catch fish is just prior to a cold front after about 3 days of warming weather. Usually the third day of a warming trend is the best. My favorite baits at this time of year are jigs and spinner baits. When the actual spawning ritual begins, the bass will not feed for approximately 2 weeks. The spawn is a very tiring and energy draining experience for the fish. After the spawn the males will guard the nest and females will move to an adjacent deeper water area to recuperate from the spawning ritual. The post spawn is one of the most difficult times of the year to catch bass since they are in a negative feeding mood and basically in a state of rest. Summer eventually brings the warmest temperatures of the year, water as well as air temperatures. Water temperatures can reach 90 degrees and hot and humid conditions can be expected through much of the summer. As water temperatures warm,

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WEATHER AND FISHING by Lance Pyle

the metabolism of fish increases and the fish have to eat more. Warmer water temperatures drive shad, one of the favorite food sources of bass, deeper into the water. The bass follow the shad to the deeper areas to survive. While surface water temperatures may be around 90 degrees, deeper portions of the water will be cooler and about 75 to 80 degrees is the preferred temperature range of the shad. Therefore, shallow water fishermen may have a hard time finding fish; the deep water fishermen will often experience more consistent action. One of the best baits to use this time of year is a Culprit worm. The best time of the day to catch bass in the summer is usually in the early morning and late evening, during periods of low light, which are the most active times of the day. Also, more sporadic rainfall during the summer allows rivers and lakes to become clearer, driving fish deeper into areas of less light penetration.

Fall is a transition time for bass. As more cold fronts make their way farther south, temperatures begin to decrease, nights become cooler, the amount of daylight decreases and the angle of the sun becomes lower. All of this leads to cooler water temperatures and the instincts of the bass tell it to feed up before the winter. The shad want to find water in their comfort zone and will gradually head up creeks to warmer water. This can be a very good fishing time again for the shallow water angler since the shad move shallower and the bass follow. Spinner baits and crank baits become very good bait choices at this time.

The shortest daylight periods are experienced in Winter. Cold weather slows the metabolism of the bass and they do not need to eat but once every 10 days. Therefore, fishing can be very slow during the cold months. However, there is one good note, the fish will tend to be more grouped up and once you locate the fish, several can be caught from one spot. Also, not all fish will go deep during the winter. Lake Hamilton in west central Arkansas is one example where the bass stay shallow all winter and can be caught on top water.

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Internet Update...

John Lewis

Since the mid-1990s, the National Weather Service in Little Rock has been providing weather information on the internet (http://www.srh.noaa.gov/lzk). In the beginning, there were only text products but there are now graphical products available and even information for wireless devices.

As far as the text products, the most popular among customers are forecasts. Those that have plans for tomorrow or a week from now access these products frequently. You can too at the following address...
http://www.srh.noaa.gov/lzk/html/wxcntl1.php

For those who are more interested in current weather conditions, there is an observations page available at...
http://www.srh.noaa.gov/lzk/html/wxcntl2.htm

Of course, watches and warnings are crucial when severe weather is expected or when storms are imminent. After all, the goal is to protect life and property. The local hazards page is at...
http://www.srh.noaa.gov/lzk/html/svrmain.php

And then there are those that are not looking for present or future data. They are searching for what happened in the past (yesterday's rainfall, record temperatures, etc.). Climate information is becoming increasingly more popular. To check it out, go to...
http://www.srh.noaa.gov/lzk/html/wxcntl3.htm

Here are some links to other valuable pages...

River and Lake Information
http://www.srh.noaa.gov/lzk/html/wxcntl4.htm

Fire Weather
http://www.srh.noaa.gov/lzk/html/forest2.htm

Aviation Weather
http://www.srh.noaa.gov/lzk/html/wxcntl7.htm

While weather information is readily available on the web, it is now also there for your cell phone or wireless device. Forecasts and radar images can be displayed. If interested, go to

HTTP Enabled Wireless Device
http://mobile.srh.weather.gov

WAP Enabled Wireless Device
http://www.srh.noaa.gov/wml

To put together text products, there used to be nothing more than typing and more typing. These days, there is far less typing and far

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Internet Update...

Continued

more creating. Forecasters envision what the future weather may hold, and then express it graphically. Once the graphics are constructed, they are shipped to the internet.

But it is much more than just graphics. If you could break a temperature graphic into pieces, you would have small areas no more than a few square miles. Each area, or grid point, would have its own temperature. The computer remembers not only the temperature for each grid point, but for other variables as well (such as wind and sky condition). With lots of grid points across Arkansas and the rest of the country, a national digital forecast database, or NDFD, is born.

Customers can use the NDFD to get weather information for each grid point . It works kind of like the clickable map on the front page of the Little Rock website. When you click on a spot, data is extracted for that spot in the form of a 7 day forecast. Want to learn more about NDFD? Try these links...

Local Graphical Forecast Page
http://www.srh.noaa.gov/data/ifps/lzk/GFE/

NDFD
http://www.nws.noaa.gov/ndfd/

You may have noticed some new radar imagery on the web. With the new images, you have the capability to keep a flat black background, or overlay terrain features, rivers and highways. The new images also plot warnings differently than you may have noticed before. They do not necessarily fit the counties, and are in polygon **shapes. Why?**

The National Weather Service is now issuing warnings for small areas (polygons) instead of entire counties. The "Warning by Polygon" program is designed to alert people in the direct path of severe weather instead of folks across an entire county that might not be affected by the storm. It is hoped that this warning method will be more accurate and will reduce false warnings (where severe weather was advertised but none occurred).

For radar imagery on-line from our office...

Regular Radar Pictures
http://www.srh.noaa.gov/radar/latest/DS.p19r0/si.klzk.shtml

New Experimental Radar Imagery
http://www.srh.noaa.gov/ridge/lzk.shtml

Warning by Polygon
http://www.srh.noaa.gov/lzk/html/polygon0405.htm

Spotting tips for estimating...

Hail Size

HAIL SIZE	DESCRIPTION
1/4 inch	Pea Size
1/2 inch	Marble Size
3/4 inch	Penny Size
7/8 inch	Nickel Size
1 inch	Quarter Size
1 1/4 inches	Half Dollar Size
1 1/2 inches	Ping Pong Ball Size
1 3/4 inches	Golf Ball Size
2 inches	Hen Egg Size
2 1/2 inches	Tennis Ball Size
2 3/4 inches	Baseball Size
3 inches	Teacup Size
4 inches	Grapefruit Size
4 1/2 inches	Softball Size

Wind Speed

ESTI-MATE	DESCRIPTION
25-31 mph	Large branches in motion; whistling heard in telephone wires
32-38 mph	Whole trees in motion; inconvenience felt walking against the wind
39-54 mph	Twigs break off trees; wind generally impedes progress
55-72 mph	Damage to chimneys and TV antennas; pushes over shallow rooted trees
73-112 mph	Peels surfaces off roofs; windows broken; light mobile homes pushed or overturned; cars pushed off road
113-157 mph	Roofs torn off houses; cars lifted off ground; severe and widespread damage.

Rainfall amount and intensity

Light	Ranging from scattered drops that do not completely wet an exposed surface regardless of duration to a condition where individual drops are easily seen; slight spray is observed over pavement; puddles form slowly; sound on roofs ranges from slow pattering to gently swishing; steady, small streams may flow in downspouts. Hourly accumulation of rain is up to .10 inches per hour with a six minute accumulation up to .01 inches.
Mod-erate	Individual drops are not clearly identifiable; spray is observable just above pavement and other hard surfaces; puddles form rapidly; downspouts on buildings are 1/4 to 1/2 full; sound on roofs ranges from swishing to a gentle roar. Hourly accumulation of rain is .11 to .30 inches per hour with a six minute accumulation of .01 to .03 inches.
Heavy	Rain seems to fall in sheets; individual drops are not identifiable; heavy spray to height of several inches is observed over hard surfaces; downspouts on buildings run more than 1/2 full; visibility is greatly reduced; sound on roofs re-sembles roll of drums or distant roar. Hourly accumulation of rain is greater than .30 inches per hour with a six minute accumulation of more than .03 inches.

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Winter Weather Terms

Joe Goudsward

While the focus of this edition of the **Scribe** has been on the autumn season, now is a good time to remember that winter weather is right around the corner. We are also all familiar with the widespread havoc winter weather can bring to the Natural State. As in the spring and summer months...we always appreciate and need your reports. We are always interested in snowfall amounts, icing, sleet or even blizzard conditions. Your reports will be used to issue, verify or even cancel winter watches, warnings or advisories and may help save lives. The National Weather Service issues a variety of winter weather watches, warnings and advisories to keep you safe. Definitions include:

Winter Storm Watch: A winter storm watch will be issued when the possibility of heavy snow, significant ice or blizzard conditions exists.

Winter Storm Warning: A winter storm warning will be issued when heavy snow, significant ice or blizzard conditions are occurring or are imminent.

Blizzard Warning: A blizzard warning will be issued when the expected visibility will be less than 1/4 of a mile in falling snow. Winds must be in excess of 35 mph for an hour or more.

Heavy Snow Warning: A heavy snow warning will be issued when 4 inches of snow in 12 hours or less or 6 inches of snow in 24 hours or less is expected.

Ice Storm Warning: An ice storm warning will be issued when freezing rain or drizzle will result in widespread ice accumulations of 1/4 of an inch or greater.

Snow Advisory: A snow advisory will be issued for a snowfall of 3 inches or less or for the first snowfall of the season. The snow could cause driving or other significant problems.

Blowing Snow Advisory: Issued when localized or widespread blowing snow reduces visibility to 1/4 or a mile or less. Winds must be under 35 mph. Drifting snow often results.

Freezing Rain/Freezing Drizzle Advisory: Issued when freezing rain or drizzle is expected for a brief period without widespread accumulations but will result in dangerous driving or walking conditions.

Wind Chill Advisory: This will be issued when wind chills are expected to be low enough to pose a threat to human safety. The threshold value is zero degrees or colder for 3 hours or more.

Freezing Fog Advisory: Issued when the air temperature is below freezing and fog is widespread. Problems occur when the fog deposits a thin layer of ice on bridges and overpasses.

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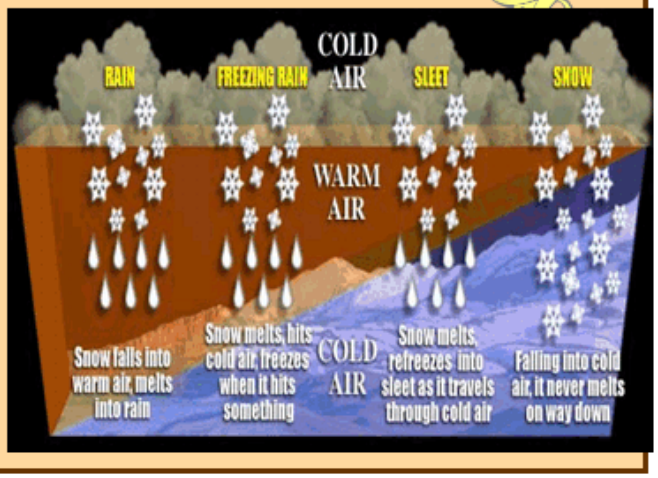
Winter Precipitation Type...

Joe Goudsward

The calendar may say autumn but we know that winter isn't very far away. Not only do we have to worry about snowstorms but freezing rain and sleet are always a concern. The type of precipitation that falls is just as important, or possibly more so, than whether precipitation falls or not; and is often very difficult to forecast in the winter months. The key to the type of precipitation that falls is often not the temperature of the ground but rather the temperature of the air above the ground and how deep a particular layer of cold or warm air is. Allow me to explain...

Snow- This is a pretty easy one to figure out. Snow will occur when the temperature of the air is below freezing from the ground all the way up. The temperature just above ground level may be above freezing, but if this layer of warm air is shallow enough, the snow does not have time to melt before it hits the ground. The temperature of objects on the ground may be above freezing and as such, the snow will melt on contact.

Sleet and freezing rain- All storms are a mixture of cold and warm air. In many parts of the storm (especially near the warm front), warmer, less dense air is flowing up and over the colder, more dense air. The result is often a "warm air sandwich" with a layer of air above freezing located in between two layers of sub-freezing air. The depth of the warm layer is crucial to what type of wintry precipitation will fall. The snow first enters the layer of warmer air and melts. If the layer of cold air near the ground is thick, the rain will refreeze into sleet or ice pellets. Sleet usually bounces when it hits a surface and does not stick to objects, but can accumulate just like snow. If the layer of cold air is shallow, and objects on the ground are less than 32 degrees, the falling rain doesn't turn into ice until it hits these objects. This is freezing rain. These objects can be cars, trees, power lines and roads.



Wind Chill Chart

Wind (mph) \ Temperature (°F)	Calm	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
5		36	31	25	19	13	7	1	-5	-11	-16	-22	-28	-34	-40	-46	-52	-57	-63
10		34	27	21	15	9	3	-4	-10	-16	-22	-28	-35	-41	-47	-53	-59	-66	-72
15		32	25	19	13	6	0	-7	-13	-19	-26	-32	-39	-45	-51	-58	-64	-71	-77
20		30	24	17	11	4	-2	-9	-15	-22	-29	-35	-42	-48	-55	-61	-68	-74	-81
25		29	23	16	9	3	-4	-11	-17	-24	-31	-37	-44	-51	-58	-64	-71	-78	-84
30		28	22	15	8	1	-5	-12	-19	-26	-33	-39	-46	-53	-60	-67	-73	-80	-87
35		28	21	14	7	0	-7	-14	-21	-27	-34	-41	-48	-55	-62	-69	-76	-82	-89
40		27	20	13	6	-1	-8	-15	-22	-29	-36	-43	-50	-57	-64	-71	-78	-84	-91
45		26	19	12	5	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-79	-86	-93
50		26	19	12	4	-3	-10	-17	-24	-31	-38	-45	-52	-60	-67	-74	-81	-88	-95
55		25	18	11	4	-3	-11	-18	-25	-32	-39	-46	-54	-61	-68	-75	-82	-89	-97
60		25	17	10	3	-4	-11	-19	-26	-33	-40	-48	-55	-62	-69	-76	-84	-91	-98

Frostbite Times: 30 minutes | 10 minutes | 5 minutes

$$\text{Wind Chill (°F)} = 35.74 + 0.6215T - 35.75(V^{0.16}) + 0.4275T(V^{0.16})$$

Where, T= Air Temperature (°F) V= Wind Speed (mph)

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The Weather Notebook; Mount Washington Observatory
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Farmers Almanac; 2005 Almanac Publishing Company
USA Today; Gannett Company